

Canberra Space Centre
<http://www.cdsc.nasa.gov/>

Canberra Deep Space Communication Complex
PO Box 1035
Tuggeranong ACT 2901
AUSTRALIA
Telephone: +61 2 6201 7809 / 7838
Facsimile: +61 2 6201 7975

HEALTH, SAFETY AND ENVIRONMENT ASSESSMENT CANBERRA SPACE CENTRE

CSIRO acknowledges that assessment and control of health, safety and environmental risk is an important process and one that is integral to achieving its strategic intent. Risk assessment of all CSIRO work and sites is intended as a planning activity to prevent incidents, injury, illness, property damage and environmental degradation as well as assist CSIRO comply with health, safety and environmental legislation.

CSIRO will identify workplace hazards that pose a risk to people and the environment, assess the magnitude of these risks and apply appropriate operational controls.

The Canberra Space Centre (located on the grounds of the Canberra Deep Space Communication Complex – CDSCC) is a public centre providing school groups with an education program in a safe and comfortable setting. The exhibits and school programs are assessed regularly for identification and assessment of hazards that may pose a threat to visiting school groups. Staffs trained in administration of first aid are on call at CDSCC at all times during school visits.

Identified hazards are examined against a hierarchy of controls to determine whether it is possible to eliminate the hazard completely or minimise the consequences.

Following is an assessment of identified health and safety hazards that visiting school groups may be exposed to during a booked visit to the Canberra Space Centre. The assessment includes identified controls to manage the risk and inherent and residual risk calculations. The inherent and residual risks are calculated using the Risk Assessment Module (see pages 2 and 3).

April 2014

CSIRO HSE Risk Matrix

| CONSEQUENCE (Con) RATINGS | |
|---------------------------|---|
| Descriptor | Definition |
| Catastrophic | Single fatality Permanent or severe health effects for one or more staff members Major release of toxic pollutants resulting in long term damage to environment and / or significant compensation costs |
| Major | Extensive injuries or Serious health impacts Significant release of toxic pollutants Localised impact with significant clean up costs |
| Moderate | Medical treatment required and notification to regulator Transient release of pollutants Localised impact with no long term damage and minimal clean-up costs |
| Minor | First Aid injury or Health impact Brief transient release of pollutants that does require notification to regulator Relatively minor clean up costs |
| Insignificant | No injuries Brief transient release of pollutants – contained on site and does not require notification to regulators No immediate impact but requires some remedial action |

| LIKELIHOOD (Li) RATINGS | |
|-------------------------|---|
| Descriptor | Definition |
| Almost Certain | Almost certain the event will happen several times. Chronic risk with history of occurrence |
| Likely | Likely to occur |
| Possible | Has occurred with the defined consequence |
| Unlikely | Low probability that the situation in the defined consequences will occur |
| Rare | Very unlikely that the situation in the defined consequences will occur |

| LIKELIHOOD | CONSEQUENCE | | | | |
|----------------|---------------|-------|----------|-------|--------------|
| | Insignificant | Minor | Moderate | Major | Catastrophic |
| Almost Certain | S | S | H | H | H |
| Likely | M | S | S | H | H |
| Possible | L | M | S | H | H |
| Unlikely | L | L | M | S | H |
| Rare | L | L | M | S | S |

| | |
|----------|-------------------------|
| H | High Risk |
| S | Significant Risk |
| M | Medium Risk |
| L | Low Risk |

Canberra Deep Space Communication Complex – Risk Assessment – School Groups and Visitors

As part of the booking process for school excursion and tour groups, each group is provided a copy of the Risk Assessment. An annual review is conducted of the Risk Assessment to identify any changes or updates required. All groups are confined within the vicinity of the Visitor Centre (indoors/outdoors) and do not enter the site.

Risk Assessment – Canberra Deep Space Communication Complex – Visitor/School/Group Visits

Note: This risk assessment is intended as a guide only. It is the individual school's responsibility to conduct their own risk assessment prior to visiting.

| Specific Hazard | Description of task/Activity | Inherent Risk | | | Controls – Existing and Proposed | Residual Risk | | |
|---|--|---------------|----------|-------------|---|---------------|----------|--------|
| | | C | L | IR | | C | L | RR |
| Fall on uneven grass and dirt surfaces around public carpark | Adults and children running in carpark area and surrounds external to the Visitor Centre | Moderate | Possible | Significant | <u>Existing:</u> All drivers including bus drivers should watch for kangaroos and other wildlife and reduce speed especially early in the morning or later in the afternoon. | Moderate | Unlikely | Medium |
| Person hit by moving vehicle (Arrival / Depart – Carpark) | The CDSCC public car park caters for all types of vehicles including buses. All visitors including students will have to walk through this area. | Major | Possible | High | <u>Existing:</u> All visitors should exercise caution when moving through this car park area. Teachers/group co-ordinator should instruct all students to exercise caution whilst moving through the car park area and supervise all students when moving through the car park area. Speed limits set in carpark, warning signs and marked and raised pedestrian crossing and no visual obstructions. | Minor | Rare | Low |
| Slips, trips and falls in the centre and grounds | The CDSCC Visitor Centre contains variety of exhibits, interactive displays and native gardens. | Moderate | Unlikely | Medium | <u>Existing:</u> Visitor Centre staff to monitor all visitors (including students) to ensure that they stay in public areas and that they do not run or climb on structures or exhibits. Teachers/group co-ordinator should specifically instruct students not to run around or climb on any structures and exhibits. Students must stay within public access areas. Staff should supervise students at all times and ensure students wear appropriate footwear. | Insignificant | Unlikely | Low |
| Cigarette Smoke | People smoking in outdoor areas and eating areas | Minor | Possible | Medium | Signage indicating no smoking areas. | Minor | Rare | Low |

| | | | | | | | | |
|--|--|---------------|----------|-------------|--|---------------|------|-----|
| Fall from low levels | Falls from low garden retaining walls, outdoor furniture and garden stairs | Minor | Unlikely | Low | Supervision of children when in the company of staff. | Minor | Rare | Low |
| Fall in children's playground | Fall from playground equipment | Moderate | Possible | Significant | Playground maintained to Australian Standard and regular independent audit/assessment of playground identifying and removing pinch points and hazards. Soft-fall material maintained and regularly replaced. | Minor | Rare | Low |
| Fall from antenna structure exhibit | Fall from climbing antenna (quadrapod) structure | Moderate | Possible | Significant | Signage indicating not to climb structure and barriers erected to prevent access to structure | Insignificant | Rare | Low |
| Automatic and gas return doors | Impact with door during opening or closing process | Minor | Rare | Low | Regular maintenance on door mechanisms to ensure correct operation and sensors set at correct levels/distances | Insignificant | Rare | Low |
| Automatic and gas return doors | Impact with door during opening or closing process | Min or | Rare | Low | Regular maintenance on door mechanisms to ensure correct operation and sensors set at correct levels/distances | Insignificant | Rare | Low |
| Impact with exhibits | Impact with exhibits (freestanding and wall-mounted), display cases, computer bench-tops | Insignificant | Possible | Low | Children supervised by adults, teachers and staff. | Insignificant | Rare | Low |

| | | | | | | | | |
|---|---|----------|----------|-------------|--|---------------|----------|-----|
| Sunburn, dehydration or heat stroke. | Visitors, students and staff using outdoor facilities may be exposed to the elements. Summer temperatures can be very high in the Canberra region and can often reach 40°C or higher. | Moderate | Moderate | Medium | <u>Existing:</u> Teachers/group co-ordinator should ensure that all students wear hats and sun screen. Students should also drink water and stay within shaded areas when possible. Staff should limit the amount of time students spend outside on very hot days. Visitor Centre staff to monitor all visitors, to be aware of heat stress and to provide appropriate first aid action if required. | Minor | Rare | Low |
| Bites from wildlife (Snakes / Spiders) | Snakes and spiders are possible in the Canberra region during both the summer and winter months. Visitors including students may encounter them while exploring the grounds. Attacks by swooping/nesting birds is possible in springtime. | Moderate | Possible | High | <u>Existing:</u> CDSCC regularly monitor and manage wildlife within the grounds. CSIRO staff are trained in first aid and have bites and stings treatment equipment. Teachers/group co-ordinator should check the ground surface and report snakes and spiders to CSIRO Staff. Students should also be instructed to be cautious of snakes and spiders and not touch these creatures if spotted. Students should be instructed to not to enter gardens. Signs erected to warn of swooping birds. Minimise exposure time outdoors. | Minor | Unlikely | Low |
| Electric shock | Electrical shock from powered equipment (eg: computers) and power outlets | Moderate | Unlikely | Medium | Electrical equipment maintained, power cords tested and checked. Power outlets fitted with approved childproof plugs. | Insignificant | Rare | Low |
| Allergic reaction to food/drinks | Allergic reaction to food and drinks served in Moon Rock Cafe. | Moderate | Possible | Significant | School groups required to notify staff of students at risk and to carry appropriate medications. Cafe staff maintains food preparation and storage areas to reduce risk of contamination. | Minor | Unlikely | Low |